

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

TRACKTHINGS LLC,

Plaintiff,

v.

AMAZON.COM, INC., AMAZON.COM
SERVICES LLC, and EERO LLC,

Defendants.

Case No. 6:21-cv-720-ADA

JURY TRIAL DEMANDED

CLAIM CONSTRUCTION ORDER

Before the Court are the Parties' claim construction briefs: Plaintiff TrackThings LLC's responsive and sur-reply briefs (ECF Nos. 44 and 49, respectively) and Defendants Amazon.com, Inc., Amazon.com Services LLC, and EERO LLC's (collectively, "Amazon") opening and reply briefs (ECF No. 40 and 46, respectively). The Court held the Markman hearing on May 10, 2022. During that hearing, the Court informed the Parties of the constructions it intended to provide for all terms. This Order does not alter any of those constructions.

I. STANDARD OF REVIEW

Generally, courts construe claim terms according to their plain and ordinary meaning. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*). The Federal Circuit applies a "heavy presumption" in favor of construing terms according to their plain and ordinary meaning, that is, the "meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014) (vacated on other grounds); *Phillips*, 415 F.3d at 1313. The "only two exceptions to [the]

general rule” that claim terms are construed according to their plain and ordinary meaning are when the patentee acts as his own lexicographer or disavows the full scope of the claim term either in the specification or during prosecution. *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). To act as his own lexicographer, the patentee must “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to define the term.” *Id.* at 1365. To disavow the full scope of a claim term, the patentee’s statements in the specification or prosecution history must represent “a clear disavowal of claim scope.” *Id.* at 1366. Accordingly, when “an applicant’s statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable.” *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

While the specification “may aid the court” in analyzing disputed language in a claim, “particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (internal citations omitted). Absent a “clear indication in the intrinsic record that the patentee intended the claims to be...limited,” courts do not read limitations found in the specification into the claims. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

II. DISCUSSION

The claim terms identified below are found in U.S. Patent Nos. 9,642,017 (“the ’017 patent”) and 9,332,442 (“the ’442 patent”).¹ The Court’s constructions are as follows:

¹ TrackThings also alleges that Amazon infringes U.S. Patent No. 10,107,893 (“the ’893 patent”), however no claim construction disputes exist for the ’893 patent.

A. “ad-hoc wireless network” (’017 Patent, Cl. 1)

TrackThings’ Proposal	Defendants’ Proposal	Court’s Final Construction
“a wireless network where relays and clients can be added and moved”	“wireless network that does not depend on an access point or a base station”	“a wireless network where relays and clients can be added and moved”

In support of its proposed construction, Amazon argues that this term “is well-known” as referring to a wireless network which does not use an access point or base station to facilitate communication between the network’s individual nodes. ECF No. 40-1 (“*Haas Decl.*”) ¶¶ 45, 124–26. For example, the IEEE 802.11 WiFi Standard and the Bluetooth Standard both define ad-hoc networks principally as networks which do not contain access points or base stations. Amazon additionally points out that the inventor amended the ’017 Patent’s claims during prosecution to distinguish prior art systems which made use of hubs, routers, switches, and other access points and base stations. *Haas Decl.* ¶ 128. Thus, Amazon argues, the inventor secured allowance of the claims by telling the Patent Office that the invention was directed to ad-hoc wireless networks—networks which do not utilize access points or base stations—while the cited prior art was not. ECF No. 46 at 8. In other words, Amazon contends, the inventor disclaimed that portion of the claim scope, and the term must be construed accordingly.

TrackThings argues that the inventor’s attempt to distinguish his invention from the prior art did not rise to the “clear disavowal of claim scope” necessary to establish prosecution history disclaimer. ECF No. 44 at 11. The inventor’s statement that prior art “remains silent” on the term “ad-hoc” does not disavow claim scope. *Id.* Rather, it points out a failure of the prior art to expressly disclose a claim element, i.e., the ability to add and move relays. *Id.* Because another reasonable interpretation of the inventor’s statements exists, TrackThings argues that the statement cannot be a valid disclaimer. TrackThings further points out the inventor’s use of “comprising” in

Claim 1. *Id.* at 9. Noting that “comprising” is read to be open-ended, TrackThings argues that the use of “comprising” opens the door for the wireless network to have unrecited elements—elements like access points or base stations. *Id.* TrackThings also points out that the specification discloses adding relays to and moving relays within the WiFi network. *Id.* at 10. Thus, TrackThings argues, its proposed construction is the only one consistent with the specification.

The Court construes “ad-hoc wireless network” as “a wireless network where relays and clients can be added and moved.” First, this construction is consistent with the terms of Claim 1 which describe an ad-hoc network “comprising” a client, relays, and a computational unit. ’017 Patent, Cl. 1. “Comprising” is an open-ended term, and Amazon’s proposed construction improperly forecloses additional elements. *See, e.g., Mars Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1375-76 (Fed. Cir. 2004). Second, TrackThings’ construction is consistent with the specification, which does not express a definition that requires no access point or base station. In fact, the specification illustrates an internet connection, which requires an access point or base station. ’017 Patent, Fig. 2. Third, the patentee’s claim in the prosecution that the prior art did not disclose the ability to add and move relays does not constitute “a clear disavowal of claim scope.” *Thorner*, 669 F.3d at 1365 (Fed. Cir. 2012). Thus, the Court construes the term as “a wireless network where relays and clients can be added and moved.”

B. “link” (’017 Patent, Cl. 1)

TrackThings’ Proposal	Defendants’ Proposal	Court’s Final Construction
“path formed between two relays”	Plain and ordinary meaning; no construction necessary. Alternatively, “a direct communication channel formed between two relays”	“path formed between two relays”

TrackThings presented this claim term for construction, so the Court will address its arguments first. TrackThings rests primarily on the '017 Patent's specification, which defines "link" as a "path formed between two relays." ECF No. 44 at 24. TrackThings argues that this definition is an example of the patentee acting as his own lexicographer, and that definition must control. *Id.*

Amazon responds by arguing that the term requires no construction. The plain and ordinary meaning of "link" is well-understood to a person of ordinary skill in the art (POSITA), as is the distinction between a "link" and a "path." ECF No. 40 at 28. Amazon further argues that the single line in the specification that TrackThings draws its construction from is insufficient to constitute lexicography. *Id.*

The Court construes this term as a "path formed between two relays." Amazon's criticism that a single statement is insufficient to establish lexicography is unpersuasive. To act as his own lexicographer, the patentee must "clearly set forth a definition of the disputed claim term," and "clearly express an intent to define the term." *Thorner*, 669 F.3d at 1366. Nowhere does the law on lexicography state that the patentee must repeat his definition. *Biogen MA Inc. v. EMD Serono, Inc.*, 976 F.3d 1326, 1336 (Fed. Cir. 2020). Here, the patentee chose to expressly define a "link," and that definition controls. Accordingly, the Court construes "link" as a "path formed between two relays."

C. "determines a placement" ('017 Patent, Cl. 1)

TrackThings' Proposal	Defendants' Proposal	Court's Final Construction
"ascertains or evaluates a placement"	"identifies the physical place for a relay"	"ascertains a placement"

In support of its proposed construction, Amazon argues that the word “placement” must refer to a physical location where a relay is placed. ECF No. 40 at 25. Amazon argues that because a relay is a physical device, it must be placed in a physical location to form a network. *Id.* Amazon further argues that the patent applies this definition of “placement” to distinguish prior art. The Acampora reference, for example, does not describe the process of placing a new relay in the network. *Id.*

To rebut Amazon’s arguments, TrackThings argues that Amazon’s construction unduly narrows the claim term. TrackThings argues that a relay’s placement in a network is dependent not only on its physical position, but also the links it forms with other relays in the network. *Id.* And because the claimed invention can measure “link integrity,” i.e., the quality of the link between two relays, it can ascertain or evaluate the best placement for a new relay. *Id.* Thus, TrackThings argues, its proposed construction best follows the claim language.

The Court construes this term as “ascertains a placement.” The language of claim 1 suggests, as Amazon argues, that the invention does identify where to place a new relay. Steps 4-10, 4-11, and 4-12 of Figure 4 clearly disclose that the invention identifies where to place a new relay as part of strengthening the links in the network. ’017 Patent, Fig. 4. At the same time, the specification references using a computational unit “to determine the link integrity of the network and determine if the need exists to add another relay.” ’017 Patent, 1:36–38. This implies that the computational unit assesses the strength of the links and determines whether a new relay should be added. The Court finds “ascertains” to best describe that process. The Court also finds that “placement” need not refer to a physical place. The claims do not require a physical place, and although a relay is a physical object, its location is defined relative to the links it forms with other relays, not by its physical place alone. Amazon points to the embodiment in Figure 4 to support its

construction, but nothing in the language of the claim supports reading a limitation from an embodiment into the claim itself. Thus, the Court construes this term as “ascertains a placement.”

D. “computational unit distributed within the ad-hoc network measuring a link integrity of each link in the ad-hoc wireless network” (’017 Patent, Cl. 1)

TrackThings’ Proposal	Defendants’ Proposal	Court’s Final Construction
<p>No construction necessary.</p> <p>Should 35 U.S.C. § 112, ¶ 6 apply:</p> <p>Function: “measuring a link integrity of each link in the ad-hoc wireless network” (“link” defined below)</p> <p>Structure: “the wireless clients and relays which form the network”</p>	<p>Governed by pre-AIA 35 U.S.C. § 112 ¶ 6. Indefinite for failure to disclose structure.</p> <p>Function: “performing a link integrity measurement in both directions for each link in the ad-hoc network”</p> <p>Structure: None.</p>	<p>No construction necessary. 35 U.S.C. § 112, ¶ 6 does not apply.</p>

Amazon argues that this term is an indefinite means-plus-function term. In support of this, Amazon notes that the word “unit” generally invokes 35 U.S.C. § 112 ¶ 6. ECF No. 40 at 4. Adding “computational” to the term, in Amazon’s view, merely suggests that the “unit” must perform a computation, a function performed by all computers. *Id.* The computational unit is defined only in reference to the functions it performs, with no reference to any structure. *Id.* To a POSITA, Amazon argues, “computational unit” does not connote any type of structure—and generic processors or computers are incapable of being “distributed within the ad-hoc network.” *Haas Decl.* ¶ 63.

In rebuttal, TrackThings points out that § 112 ¶ 6 is presumed not to apply when the claim term lacks the word “means.” ECF No. 44 at 15. The mere fact that a claim may contain functional language does not convert the entire claim to a means-plus-function claim. *Id.* TrackThings further argues that “computational unit” is a term of art that a POSITA would understand at the time of the invention. ECF No. 44-1 (“*Bims Decl.*”) ¶ 49. TrackThings argues that Amazon unjustifiably

broke a term of art into its constituent words, and then attacked those words for not disclosing structure. *Id.* In support of this contention, TrackThings points to other known structural terms of art that use the word “unit,” like central processing unit (CPU) and graphics processing unit (GPU). *Id.* TrackThings further contends that the use of “computational unit” by contemporaneous art supports its position. Thus, TrackThings argues, no means-plus-function construction is necessary, and the term’s ordinary meaning applies.

The Court finds no construction necessary for this term. This claim term lacks the word “means,” which the Federal Circuit has instructed creates a presumption that the claim is not governed by 35 U.S.C. § 112 ¶ 6. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc). To overcome that presumption, Amazon must demonstrate that the words of the claim are not understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. *SecurityProfiling, LLC v. Trend Micro Am., Inc.*, No. 3:17-CV-1484-N, 2018 WL 4585279, at *3 (N.D. Tex. Sept. 25, 2018). If on the other hand, “the intrinsic record” or “extrinsic evidence” show that the words at issue refer to a particular structure, the presumption stands and § 112 ¶ 6 does not apply. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1024 (Fed. Cir. 2006).

Here, TrackThings’ expert stated that “computational unit” is an understood term of art akin to other terms like “central processing unit” and “graphics processing unit.” *Bims Decl.* ¶ 49. This is confirmed in the ’017 Patent’s specification when it describes a de-centralized computational unit wherein control is distributed to each relay, and each relay has a unit that can be a combination of processors which in aggregate perform the disclosed operations. Amazon’s argument that the word “computational” is insufficient to provide structure to “unit” is unpersuasive. By its logic, “central processing” would also be insufficient to render “central

processing unit” a structural term, and the same with “graphics processing unit.” *See e.g. Samsung Elec. Am., Inc. v. Prisia Eng’g Corp.*, 948 F.3d 1342, 1353-54, (Fed. Cir. 2020) (“We agree with Samsung that the term ‘digital processing unit’ is not a ‘means-plus-function’ limitation subject to analysis under section 112, paragraph 6.”); *Canon, Inc. v. TCL Elecs. Holdings Ltd.*, No. 2:18-CV-546-JRG, 2020 WL 2098197, at *15 (E.D. Tex. May 1, 2020) (“[w]hile ‘unit’ is a nonce term that can be ‘tantamount to using the word means,’ . . . the full term in question is ‘control unit.’”).

Furthermore, a POSITA would understand the claim language as a whole to connote structure sufficient for (1) measuring a link integrity of each link in the ad-hoc wireless network, (2) determining a placement of a new relay at a new location into the ad-hoc wireless network to improve the link integrity of the ad-hoc wireless network, and (3) reconfiguring the network to improve the link integrity. *Bims Decl.* ¶¶ 48-64. Put another way, the remainder of the claims, as confirmed by the specification, recites how the computational unit is distributed structurally and achieves a claim-recited objective and therefore provides additional indicia of structure to maintain the presumption against § 112 ¶ 6. Because Amazon failed to show that “computational unit” is not understood by a POSITA to refer to a particular structure, 35 U.S.C. § 112 ¶ 6 does not apply. And because “computational unit” has a known structure to a POSITA, the Court need not provide a definition apart from its known structure. Accordingly, no construction is necessary for this term.

E. “computational unit determines a placement of a new relay at a new location into the ad-hoc wireless network to improve the link integrity of the ad-hoc wireless network” (’017 Patent, Cl. 1)

TrackThings’ Proposal	Defendants’ Proposal	Court’s Final Construction
<p>No construction necessary.</p> <p>Should 35 U.S.C. § 112, ¶ 6 apply:</p> <p>Function: “determines a placement of a new relay at a</p>	<p>Governed by pre-AIA 35 U.S.C. § 112 ¶ 6. Indefinite for failure to disclose structure.</p> <p>Function: “determin[ing] a</p>	<p>No construction necessary. 35 U.S.C. § 112, ¶ 6 does not apply.</p>

new location into the ad-hoc wireless network to improve the link integrity of the ad-hoc wireless network” (“determines a placement” defined below) Structure: “the wireless clients and relays which form the network”	placement of a new relay [i.e. identifying the physical place for a relay] at a new location into the ad-hoc wireless network to improve the link integrity of the ad-hoc wireless network.” Structure: algorithmic steps disclosed at ’017 patent, 4:7–25, Fig. 4, and equivalents thereof.	
--	--	--

Amazon argues that this term is an indefinite means-plus-function term. In support of this, Amazon notes that the word “unit” generally invokes 35 U.S.C. § 112 ¶ 6. ECF No. 40 at 4. Adding “computational” to the term, in Amazon’s view, merely suggests that the “unit” must perform a computation, a function performed by all computers. *Id.* The computational unit is defined only in reference to the functions it performs, with no reference to any structure. *Id.* To a POSITA, Amazon argues, “computational unit” does not connote any type of structure—and generic processors or computers are incapable of performing complex functions like “determin[ing] a placement” without special programming or an algorithm. *Haas Decl.* ¶¶ 63–67, 78–80, 87–90, 101–04.

In rebuttal, TrackThings points out that § 112 ¶ 6 is presumed not to apply when the claim term lacks the word “means.” ECF No. 44 at 15. The mere fact that a claim may contain functional language does not convert the entire claim to a means-plus-function claim. *Id.* TrackThings further argues that “computational unit” is a term of art that a POSITA would understand at the time of the invention. *Id.* TrackThings argues that Amazon unjustifiably broke a term of art into its constituent words, and then attacked those words for not disclosing a structure. *Id.* In support of this contention, TrackThings points to other known structural terms of art that use the word “unit,”

like central processing unit (CPU) and graphics processing unit (GPU). *Id.* TrackThings further contends that the use of “computational unit” by contemporaneous art supports its position. Thus, TrackThings argues, no means-plus-function construction is necessary, and the term’s ordinary meaning applies.

The Court finds no construction necessary for this term. This claim term lacks the word “means,” which the Federal Circuit has instructed creates a presumption that the claim is not governed by 35 U.S.C. § 112 ¶ 6. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc). To overcome that presumption, Amazon must demonstrate that the words of the claim are not understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *SecurityProfiling, LLC v. Trend Micro Am., Inc.*, No. 3:17-CV-1484-N, 2018 WL 4585279, at *3 (N.D. Tex. Sept. 25, 2018). If on the other hand, “the intrinsic record” or “extrinsic evidence” show that the words at issue refer to a particular structure, the presumption stands and § 112 ¶ 6 does not apply. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1024 (Fed. Cir. 2006).

Here, TrackThings’ expert demonstrates that “computational unit” is an understood term of art akin to other terms like “central processing unit” and “graphics processing unit.” *Bims Decl.* ¶ 49. This is confirmed in the ’017 Patent’s specification when it describes a de-centralized computational unit wherein control is distributed to each relay, and each relay has a unit that can be a combination of processors which in aggregate perform the disclosed operations. Amazon’s argument that the word “computational” is insufficient to provide structure to “unit” is unpersuasive. By its logic, “central processing” would also be insufficient to render “central processing unit” a structural term, and the same with “graphics processing unit.” *See e.g. Samsung Elec. Am., Inc. v. Prisia Eng’g Corp.*, 948 F.3d 1342, 1353-54, (Fed. Cir. 2020) (“We agree with

Samsung that the term ‘digital processing unit’ is not a ‘means-plus-function’ limitation subject to analysis under section 112, paragraph 6.”); *Canon, Inc. v. TCL Elecs. Holdings Ltd.*, No. 2:18-CV-546-JRG, 2020 WL 2098197, at *15 (E.D. Tex. May 1, 2020) (“[w]hile ‘unit’ is a nonce term that can be “tantamount to using the word means,” . . . the full term in question is ‘control unit.’”).

Furthermore, as TrackThings’s expert confirms, a POSITA would understand the claim language as a whole to connote structure sufficient for (1) measuring a link integrity of each link in the ad-hoc wireless network, (2) determining a placement of a new relay at a new location into the ad-hoc wireless network to improve the link integrity of the ad-hoc wireless network, and (3) reconfiguring the network to improve the link integrity. *Bims Decl.* ¶¶ 48-64. Put another way, the remainder of the claims, as confirmed by the specification, recites how the computational unit is distributed structurally and achieves a claim-recited objective and therefore provides additional indicia of structure to maintain the presumption against § 112 ¶ 6. Because Amazon failed to show that “computational unit” is not understood by a POSITA to refer to a particular structure, 35 U.S.C. § 112 ¶ 6 does not apply. And because “computational unit” has a known structure to a POSITA, the Court need not provide a definition apart from its known structure. Accordingly, no construction is necessary for this term.

**F. “computational unit reconfigures the network to improve the link integrity”
('017 Patent, Cl. 6)**

TrackThings’ Proposal	Defendants’ Proposal	Court’s Final Construction
No construction necessary. Should 35 U.S.C. § 112, ¶ 6 apply: Function: “reconfigures the network to improve the link integrity”	Governed by pre-AIA § 112, ¶ 6. Indefinite for failure to disclose structure. Function: “reconfigures the network to improve the link integrity.” Structure: None.	No construction necessary. 35 U.S.C. § 112, ¶ 6 does not apply.

Structure: “the wireless clients and relays which form the network”		
--	--	--

Amazon argues that this term is an indefinite means-plus-function term. In support of this, Amazon notes that the word “unit” generally invokes 35 U.S.C. § 112 ¶ 6. ECF No. 40 at 4. Adding “computational” to the term, in Amazon’s view, merely suggests that the “unit” must perform a computation, a function performed by all computers. *Id.* The computational unit is defined only in reference to the functions it performs, with no reference to any structure. *Id.* To a POSITA, Amazon argues, “computational unit” does not connote any type of structure—and generic processors or computers are incapable of performing complex functions like “reconfigur[ing] the network” without special programming or an algorithm. *Haas Decl.* ¶¶ 63–67, 78–80, 87–90, 101–04.

In rebuttal, TrackThings points out that § 112 ¶ 6 is presumed not to apply when the claim term lacks the word “means.” ECF No. 44 at 15. The mere fact that a claim may contain functional language does not convert the entire claim to a means-plus-function claim. *Id.* TrackThings further argues that “computational unit” is a term of art that a POSITA would understand at the time of the invention. *Id.* TrackThings argues that Amazon unjustifiably broke a term of art into its constituent words, and then attacked those words for not disclosing a structure. *Id.* In support of this contention, TrackThings points to other known structural terms of art that use the word “unit,” like central processing unit (CPU) and graphics processing unit (GPU). *Id.* TrackThings further contends that the use of “computational unit” by contemporaneous art supports its position. Thus, TrackThings argues, no means-plus-function construction is necessary, and the term’s ordinary meaning applies.

The Court finds no construction necessary for this term. This claim term lacks the word “means,” which the Federal Circuit has instructed creates a presumption that the claim is not governed by 35 U.S.C. § 112 ¶ 6. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc). To overcome that presumption, Amazon must demonstrate that the words of the claim are not understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. *SecurityProfiling, LLC v. Trend Micro Am., Inc.*, No. 3:17-CV-1484-N, 2018 WL 4585279, at *3 (N.D. Tex. Sept. 25, 2018). If on the other hand, “the intrinsic record” or “extrinsic evidence” show that the words at issue refer to a particular structure, the presumption stands and § 112 ¶ 6 does not apply. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1024 (Fed. Cir. 2006).

Here, TrackThings’ expert demonstrates that “computational unit” is an understood term of art akin to other terms like “central processing unit” and “graphics processing unit.” *Bims Decl.* ¶ 49. This is confirmed in the ’017 Patent’s specification when it describes a de-centralized computational unit wherein control is distributed to each relay, and each relay has a unit that can be a combination of processors which in aggregate perform the disclosed operations. Amazon’s argument that the word “computational” is insufficient to provide structure to “unit” is unpersuasive. By its logic, “central processing” would also be insufficient to render “central processing unit” a structural term, and the same with “graphics processing unit.” See e.g. *Samsung Elec. Am., Inc. v. Prisua Eng’g Corp.*, 948 F.3d 1342, 1353-54, (Fed. Cir. 2020) (“We agree with Samsung that the term ‘digital processing unit’ is not a ‘means-plus-function’ limitation subject to analysis under section 112, paragraph 6.”); *Canon, Inc. v. TCL Elecs. Holdings Ltd.*, No. 2:18-CV-546-JRG, 2020 WL 2098197, at *15 (E.D. Tex. May 1, 2020) (“[w]hile ‘unit’ is a nonce term that can be “tantamount to using the word means,” . . . the full term in question is ‘control unit.’”).

Furthermore, as TrackThings’s expert confirms, a POSITA would understand the claim language as a whole to connote structure sufficient for (1) measuring a link integrity of each link in the ad-hoc wireless network, (2) determining a placement of a new relay at a new location into the ad-hoc wireless network to improve the link integrity of the ad-hoc wireless network, and (3) reconfiguring the network to improve the link integrity. *Bims Decl.* ¶¶ 48-64. Put another way, the remainder of the claims, as confirmed by the specification, recites how the computational unit is distributed structurally and achieves a claim-recited objective and therefore provides additional indicia of structure to maintain the presumption against § 112 ¶ 6. Because Amazon failed to show that “computational unit” is not understood by a POSITA to refer to a particular structure, 35 U.S.C. § 112 ¶ 6 does not apply. And because “computational unit” has a known structure to a POSITA, the Court need not provide a definition apart from its known structure. Accordingly, no construction is necessary for this term.

G. “[computational unit configured to] / [configuring a computational unit to] de-centralize control by distributing the control to wireless clients and relays which form the network” (’442 Patent, Cls. 8, 16, 24)

TrackThings’ Proposal	Defendants’ Proposal	Court’s Final Construction
<p>No construction necessary.</p> <p>Should 35 U.S.C. § 112, ¶ 6 apply:</p> <p>Function: “de-centraliz[ing] control by distributing the control to wireless clients and relays which form the network”</p> <p>Structure: “the wireless clients and relays which form the network”</p>	<p>Governed by pre-AIA 35 U.S.C. § 112 ¶ 6. Indefinite for failure to disclose structure.</p> <p>Function: “decentraliz[ing] control by distributing the control to wireless clients and relays which form the network.”</p> <p>Structure: None.</p>	<p>No construction necessary. 35 U.S.C. § 112, ¶ 6 does not apply.</p>

Amazon argues that this term is an indefinite means-plus-function term. In support of this, Amazon notes that the word “unit” generally invokes 35 U.S.C. § 112 ¶ 6. ECF No. 40 at 4. Adding “computational” to the term, in Amazon’s view, merely suggests that the “unit” must perform a computation, a function performed by all computers. *Id.* The computational unit is defined only in reference to the functions it performs, with no reference to any structure. *Id.* To a POSITA, Amazon argues, “computational unit” does not connote any type of structure—and generic processors or computers are incapable of performing complex functions like “decentraliz[ing] control by distributing the control to wireless clients and relays which form the network” without special programming or an algorithm. *Haas Decl.* ¶¶ 63–67, 78–80, 87–90, 101–04.

In rebuttal, TrackThings points out that § 112 ¶ 6 is presumed not to apply when the claim term lacks the word “means.” ECF No. 44 at 15. The mere fact that a claim may contain functional language does not convert the entire claim to a means-plus-function claim. *Id.* TrackThings further argues that “computational unit” is a term of art that a POSITA would understand at the time of the invention. *Id.* TrackThings argues that Amazon unjustifiably broke a term of art into its constituent words, and then attacked those words for not disclosing a structure. *Id.* In support of this contention, TrackThings points to other known structural terms of art that use the word “unit,” like central processing unit (CPU) and graphics processing unit (GPU). *Id.* TrackThings further contends that the use of “computational unit” by contemporaneous art supports its position. Thus, TrackThings argues, no means-plus-function construction is necessary, and the term’s ordinary meaning applies.

The Court finds no construction necessary for this term. This claim term lacks the word “means,” which the Federal Circuit has instructed creates a presumption that the claim is not governed by 35 U.S.C. § 112 ¶ 6. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed.

Cir. 2015) (en banc). To overcome that presumption, Amazon must demonstrate that the words of the claim are not understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *SecurityProfiling, LLC v. Trend Micro Am., Inc.*, No. 3:17-CV-1484-N, 2018 WL 4585279, at *3 (N.D. Tex. Sept. 25, 2018). If on the other hand, “the intrinsic record” or “extrinsic evidence” show that the words at issue refer to a particular structure, the presumption stands and § 112 ¶ 6 does not apply. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1024 (Fed. Cir. 2006).

Here, TrackThings’ expert demonstrates that “computational unit” is an understood term of art akin to other terms like “central processing unit” and “graphics processing unit.” *Bims Decl.* ¶ 49. This is confirmed in the ’017 Patent’s specification when it describes a de-centralized computational unit wherein control is distributed to each relay, and each relay has a unit that can be a combination of processors which in aggregate perform the disclosed operations. Amazon’s argument that the word “computational” is insufficient to provide structure to “unit” is unpersuasive. By its logic, “central processing” would also be insufficient to render “central processing unit” a structural term, and the same with “graphics processing unit.” *See e.g. Samsung Elec. Am., Inc. v. Prisia Eng’g Corp.*, 948 F.3d 1342, 1353-54, (Fed. Cir. 2020) (“We agree with Samsung that the term ‘digital processing unit’ is not a ‘means-plus-function’ limitation subject to analysis under section 112, paragraph 6.”); *Canon, Inc. v. TCL Elecs. Holdings Ltd.*, No. 2:18-CV-546-JRG, 2020 WL 2098197, at *15 (E.D. Tex. May 1, 2020) (“[w]hile ‘unit’ is a nonce term that can be “tantamount to using the word means,” . . . the full term in question is ‘control unit.’”).

Furthermore, as TrackThings’s expert confirms, a POSITA would understand the claim language as a whole to connote structure sufficient for (1) measuring a link integrity of each link in the ad-hoc wireless network, (2) determining a placement of a new relay at a new location into

the ad-hoc wireless network to improve the link integrity of the ad-hoc wireless network, and (3) reconfiguring the network to improve the link integrity. *Bims Decl.* ¶¶ 48-64. Put another way, the remainder of the claims, as confirmed by the specification, recites how the computational unit is distributed structurally and achieves a claim-recited objective and therefore provides additional indicia of structure to maintain the presumption against § 112 ¶ 6. Because Amazon failed to show that “computational unit” is not understood by a POSITA to refer to a particular structure, 35 U.S.C. § 112 ¶ 6 does not apply. And because “computational unit” has a known structure to a POSITA, the Court need not provide a definition apart from its known structure. Accordingly, no construction is necessary for this term.

H. “partitioning the plurality of streams of bits each partitioned into a plurality of portions” (’442 Patent, Cl. 9)

TrackThings’ Proposal	Defendants’ Proposal	Court’s Final Construction
“partitioning the plurality of streams of bits into a plurality of portions.”	“partitioning each of the input stream of bits from the Internet, the stream of bits from the first cell phone, and the stream of bits from the second cell phone into two or more portions”	“partitioning each of the input stream of bits from the Internet, the stream of bits from the first cell phone, and the stream of bits from the second cell phone into two or more portions”

Amazon argues that its proposed construction is most consistent with the language of the claim. Amazon contends that the claim properly concerns partitioning three streams of bits: the input stream of bits from the internet, the stream of bits from one cell phone, and the stream of bits from a second cell phone. ECF No. 40 at 19. Unlike TrackThings’s proposed construction, Amazon argues, its construction properly weighs each word of the claim. Amazon argues that the plain language of the claim requires “each” of the three streams to be partitioned—and that TrackThings improperly reads this language out of the claim. *Id.* at 20. Amazon argues that there

is no indication that the “each partitioned” language it points to was included in error, and thus, its proposed construction is correct. *Id.*

In support of its proposed construction, TrackThings argues that its construction corrects a facially evident clerical error. TrackThings points to similarities in the language of Claims 1 and 9 to support its argument. ECF 44 at 30. Comparing the two claims, the past participle is replaced with a gerund at the front of each clause, *e.g.* “received” becomes “receiving,” “the first relay transmitting” becomes “transmitting...by the first relay,” and “coupled” becomes “coupling.” While “partitioned” became “partitioning,” TrackThings argues, the original “partitioned” language also was maintained in error. *Id.* TrackThings further accuses Amazon of unduly limiting the claim’s language: Amazon’s construction improperly narrows a “plurality of streams” to be only three streams. *Id.*

The Court construes this term as “partitioning each of the input stream of bits from the Internet, the stream of bits from the first cell phone, and the stream of bits from the second cell phone into two or more portions.” As an initial matter, courts may only rewrite claims to fix typographical errors where the claim contains an obvious answer on its face and the intrinsic evidence shows that the correction is not subject to reasonable debate. *See Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1354 (holding a court can correct an alleged error in a patent “only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims”); *see also* Ann. Pat. Digest (Matthews) § 6:7.20 (Dec. 2021) (collecting authorities). That is not the case here.

The words “each partitioned” fit grammatically into the remainder of the claim. These words refer to the recited “partitioning the plurality of streams of bits” and explain that “each” of the plurality of streams must be partitioned into a “plurality of portions.” This requirement also makes sense in the context of the claim: “each partitioned” identifies that the input stream from

the Internet and the stream from each cell phone is partitioned so that a portion of each stream can be sent to the respective destination. Moreover, the prosecution history does not suggest that this was a typographical error. “Each partitioned” was included in the original claims submitted to the USPTO, and the words were retained through subsequent rounds of amendments made to other claims. ECF 40-2 (“*Young Decl.*”) ¶ 12. The Court thus sees no reason to read a limitation out of the claim and construes this term as “partitioning each of the input stream of bits from the Internet, the stream of bits from the first cell phone, and the stream of bits from the second cell phone into two or more portions.”

SIGNED this 14th day of May, 2022.


DEREK T. GILLILAND
UNITED STATES MAGISTRATE JUDGE